



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

**STANDARD LOW BID PROJECT – INVITATIONAL
Project Budgets \$50,000 - \$100,000**

November 16, 2006

**COMMUNICATION AND SECURITY
UPGRADE
DAVIS APPLIED TECHNOLOGY
COLLEGE
KAYSVILLE, UTAH**

DFCM Project Number 05175220

Spectrum Engineers, Inc.

TABLE OF CONTENTS

	<u>Page Numbers</u>
Title Page	1
Table of Contents	2
Invitation to Bid	3
Project Schedule	4
Bid Form	5
Instructions to Bidders	7
Bid Bond	11
Contractors Sublist Form	12
Fugitive Dust Plan	15
Contractor's Agreement	22
Performance Bond	27
Payment Bond	28
Change Order Form	29
Certificate of Substantial Completion	30

Current copies of the following documents are hereby made part of these contract documents by reference. These documents are available on the DFCM web site at <http://dfcm.utah.gov> or are available upon request from DFCM.

DFCM General Conditions dated May 25, 2005.

DFCM Application and Certification for Payment dated May 25, 2005.

Technical Specifications :

Drawings:

The Agreement and General Conditions dated May 25, 2005 have been updated from versions that were formally adopted and in use prior to this date. The changes made to the General Conditions are identified in a document entitled Revisions to General Conditions that is available on DFCM's web site at <http://dfcm.utah.gov>

INVITATION TO BID

Only firms that have been invited to submit bids on this project are allowed to bid on this project.

Sealed bids will be received by the Division of Facilities Construction and Management (DFCM) for:

COMMUNICATIONS AND SECURITY UPGRADE
DAVIS APPLIED TECHNOLOGY COLLEGE, KAYSVILLE, UTAH
DFCM PROJECT NO: 05175220

<u>Company</u>	<u>Contact</u>	<u>Phone</u>	<u>Fax</u>
Hidden Peak Electric Co. Inc.	Brian Bales	801-262-5845	801-262-5689
Arco Electric	Phil Gallegos	801-566-1695	801-566-0927
Capital Electric	Jim Thomas	801-908-6660	801-908-6667
Utah Controls	Bryan Dahl	801-990-1950	801-990-1955

Bids will be in accordance with the Contract Documents that will be available on Thursday November 16, 2006, and distributed in electronic format only on CDs from DFCM, 4110 State Office Building, SLC, Utah and on the DFCM web page at <http://dfcm.utah.gov>. For questions regarding this project, please contact Jim Russell, DFCM, at 801-538-9784. No others are to be contacted regarding this bidding process. The construction budget for this project is \$80,000.00.

A **mandatory** pre-bid meeting will be held at **9:00 AM on Wednesday, November 22, 2006** at DATC 550 East 300 South, Kaysville, Utah. All bidders wishing to bid on this project are required to attend this meeting.

Bids will be received until the hour of **3:00 PM on Wednesday, December 6, 2006** at DFCM, 4110 State Office Building, Salt Lake City, Utah 84114. Bids will be opened and read aloud in the DFCM Conference Room, 4110 State Office Building, Salt Lake City, Utah. NOTE: Bids must be received at 4110 State Office Building by the specified time.

A bid bond in the amount of five percent (5%) of the bid amount, made payable to the Division of Facilities Construction and Management on DFCM's bid bond form, shall accompany the bid.

The Division of Facilities Construction and Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of DFCM.

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

Joanna Fisher, Contract Coordinator
4110 State Office Building, Salt Lake City, Utah 84114

**PROJECT SCHEDULE**

PROJECT NAME: COMMUNICATION & SECURITY UPGRADE				
DAVIS APPLIED TECHNOLOGY COLLEGE, KAYSVILLE, UTAH				
DFCM PROJECT NO. 05175220				
Event	Day	Date	Time	Place
Bidding Documents Available	Thursday	November 16, 2006	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT or DFCM web site *
Mandatory Pre-bid Site Meeting	Wednesday	November 22, 2006	9:00 AM	DATC 550 East 300 South, Kaysville, Utah
Last Day to Submit Questions	Wednesday	November 29, 2006	4:00 PM	e-mail jimrussell@utah.gov
Final Addendum Issued	Friday	December 1, 2006	4:00 PM	DFCM web site *
Prime Contractors Turn In Bid and Bid Bond / Bid Opening in DFCM Conference Room	Wednesday	December 6, 2006	3:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
Sub-contractor List Due	Thursday	December 7, 2006	3:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
<i>Project Completion</i>		120 Days		

* DFCM's web site address is <http://dfcm.utah.gov>



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

BID FORM

NAME OF BIDDER _____ DATE _____

To the Division of Facilities Construction and Management
4110 State Office Building
Salt Lake City, Utah 84114

The undersigned, responsive to the "Notice to Contractors" and in accordance with the "Instructions to Bidders", in compliance with your invitation for bids for the Communication and Security Upgrade, Davis Applied Technology College, Kaysville, Utah, **Project No. 05175220** and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: _____

For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

_____ DOLLARS (\$_____)
(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete within 120 calendar days after receipt of the Notice to Proceed, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$250.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of _____

The undersigned Contractor's License Number for Utah is _____.

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in the Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract.

The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within the time set forth.

Type of Organization:

(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws:

Respectfully submitted,

Name of Bidder

ADDRESS:

Authorized Signature

INSTRUCTIONS TO BIDDERS

1. **Drawings and Specifications, Other Contract Documents**

Drawings and Specifications, as well as other available Contract Documents, may be obtained as stated in the Invitation to Bid.

2. **Bids**

Before submitting a bid, each contractor shall carefully examine the Contract Documents, shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify the DFCM Representative and the necessary changes shall be accomplished by Addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided in the procurement documents and submitted in a sealed envelope at the location specified by the Invitation to Bid prior to the deadline for submission of bids.

Bid bond security, in the amount of five percent (5%) of the bid, made payable to the Division of Facilities Construction and Management, shall accompany bid. **THE BID BOND MUST BE ON THE BID BOND FORM PROVIDED IN THE PROCUREMENT DOCUMENTS IN ORDER TO BE CONSIDERED AN ACCEPTABLE BID.**

If the bid bond security is submitted on a bid bond form other than DFCM's required bid bond form, and the bid security meets all other legal requirements, the bidder will be allowed to provide an acceptable bid bond by the close of business on the next business day following notification by DFCM of submission of a defective bid bond security. NOTE: A cashier's check cannot be used as a substitute for a bid bond.

3. **Contract and Bond**

The Contractor's Agreement will be in the form bound in the specifications. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the forms provided in the procurement documents. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the contract sum and secured from a company that meets the requirements specified in the requisite forms. Any bonding requirements for subcontractors will be specified in the Supplementary General Conditions.

4. Listing of Subcontractors

Listing of Subcontractors shall be as summarized in the “Instructions and Subcontractor’s List Form”, which are included as part of these Contract Documents. The Subcontractors List shall be delivered to DFCM or faxed to DFCM at (801)538-3677 within 24 hours of the bid opening. Requirements for listing additional subcontractors will be listed in the Contract Documents.

DFCM retains the right to audit or take other steps necessary to confirm compliance with requirements for the listing and changing of subcontractors. Any contractor who is found to not be in compliance with these requirements is subject to a debarment hearing and may be debarred from consideration for award of contracts for a period of up to three years.

5. Interpretation of Drawings and Specifications

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to the DFCM Project Manager a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addenda posted on DFCM’s web site at <http://dfcm.utah.gov>. Neither the DFCM nor A/E will be responsible for any other explanations or interpretations of the proposed documents. A/E shall be deemed to refer to the architect or engineer hired by DFCM as the A/E or Consultant for the Project.

6. Addenda

Addenda will be posted on DFCM’s web site at <http://dfcm.utah.gov>. Contractors are responsible for obtaining information contained in each addendum from the web site. Addenda issued prior to the submittal deadline shall become part of the bidding process and must be acknowledged on the bid form. Failure to acknowledge addenda may result in disqualification from bidding.

7. Award of Contract

The Contract will be awarded as soon as possible to the lowest, responsive and responsible bidder, based on the lowest combination of base bid and acceptable prioritized alternates, provided the bid is reasonable, is in the interests of the State of Utah to accept and after applying the Utah Preference Laws in U.C.A. Title 63, Chapter 56. DFCM reserves the right to waive any technicalities or formalities in any bid or in the bidding. Alternates will be accepted on a prioritized basis with Alternate 1 being highest priority, Alternate 2 having second priority, etc.

8. DFCM Contractor Performance Rating

As a contractor completes each DFCM project, DFCM, the architect/engineer and the using agency will evaluate project performance based on the enclosed “DFCM Contractor Performance Rating” form. The ratings issued on this project will not affect this project but may affect the award on future projects.

9. Licensure

The Contractor shall comply with and require all of its subcontractors to comply with the license laws as required by the State of Utah.

10. Right to Reject Bids

DFCM reserves the right to reject any or all Bids.

11. Time is of the Essence

Time is of the essence in regard to all the requirements of the Contract Documents.

12. Withdrawal of Bids

Bids may be withdrawn on written request received from bidder prior to the time fixed for opening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

13. Product Approvals

Where reference is made to one or more proprietary products in the Contract Documents, but restrictive descriptive materials of one or more manufacturer(s) is referred to in the Contract Documents, the products of other manufacturers will be accepted, provided they equal or exceed the standards set forth in the drawings and specifications and are compatible with the intent and purpose of the design, subject to the written approval of the A/E. Such written approval must occur prior to the deadline established for the last scheduled addenda to be issued. The A/E's written approval will be in an issued addendum. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design as determined by the A/E.

14. Financial Responsibility of Contractors, Subcontractors and Sub-subcontractors

Contractors shall respond promptly to any inquiry in writing by DFCM to any concern of financial responsibility of the contractor, subcontractor or sub-subcontractor.

15. Debarment

By submitting a bid, the Contractor certifies that neither it nor its principals, including project and site managers, have been, or are under consideration for, debarment or suspension, or any action that would exclude such from participation in a construction contract by any governmental department or agency. If the Contractor cannot certify this statement, attach to the bid a detailed written explanation which must be reviewed and approved by DFCM as part of the requirements for award of the Project.

BID BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed, (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the STATE OF UTAH, hereinafter referred to as the "Obligee," in the amount of \$ _____ (5% of the accompanying bid), being the sum of this Bond to which payment the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted to Obligee the accompanying bid incorporated by reference herein, dated as shown, to enter into a contract in writing for the _____ Project.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal does not execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then the sum of the amount stated above will be forfeited to the State of Utah as liquidated damages and not as a penalty; if the said principal shall execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void. It is expressly understood and agreed that the liability of the Surety for any and all defaults of the Principal hereunder shall be the full penal sum of this Bond. The Surety, for value received, hereby stipulates and agrees that obligations of the Surety under this Bond shall be for a term of sixty (60) days from actual date of the bid opening.

PROVIDED, HOWEVER, that this Bond is executed pursuant to provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals on the date indicated below, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

DATED this _____ day of _____, 20_____.

Principal's name and address (if other than a corporation):

By: _____

Title: _____

Principal's name and address (if a corporation):

By: _____

Title: _____
(Affix Corporate Seal)

Surety's name and address:

STATE OF _____)
COUNTY OF _____) ss.

By: _____
Attorney-in-Fact (Affix Corporate Seal)

On this ____ day of _____, 20_____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20_____.

My Commission Expires: _____

Resides at: _____

Agency: _____
Agent: _____
Address: _____
Phone: _____

NOTARY PUBLIC

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General

**Division of Facilities Construction and****INSTRUCTIONS AND SUBCONTRACTORS LIST FORM**

The three low bidders, as well as all other bidders that desire to be considered, are required by law to submit to DFCM within 24 hours of bid opening a list of **ALL** first-tier subcontractors, including the subcontractor's name, bid amount and other information required by Building Board Rule and as stated in these Contract Documents, on the following basis:

PROJECTS UNDER \$500,000 - ALL SUBS \$20,000 OR OVER MUST BE LISTED
PROJECTS \$500,000 OR MORE - ALL SUBS \$35,000 OR OVER MUST BE LISTED

- Any additional subcontractors identified in the bid documents shall also be listed.
- The DFCM Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law.
- List subcontractors for base bid as well as the impact on the list that the selection of any alternate may have.
- Bidder may not list more than one subcontractor to perform the same work.
- Bidder must list "Self" if performing work itself.

LICENSURE:

The subcontractor's name, the type of work, the subcontractor's bid amount, and the subcontractor's license number as issued by DOPL, if such license is required under Utah Law, shall be listed. Bidder shall certify that all subcontractors, required to be licensed, are licensed as required by State law. A subcontractor includes a trade contractor or specialty contractor and does not include suppliers who provide only materials, equipment, or supplies to a contractor or subcontractor.

BIDDER LISTING 'SELF' AS PERFORMING THE WORK:

Any bidder that is properly licensed for the particular work and intends to perform that work itself in lieu of a subcontractor that would otherwise be required to be on the subcontractor list, must insert the term 'Self' for that category on the subcontractor list form. Any listing of 'Self' on the sublist form shall also include the amount allocated for that work.

'SPECIAL EXCEPTION':

A bidder may list 'Special Exception' in place of a subcontractor when the bidder intends to obtain a subcontractor to perform the work at a later date because the bidder was unable to obtain a qualified or reasonable bid under the provisions of U.C.A. Section 63A-5-208(4). The bidder shall insert the term 'Special Exception' for that category of work, and shall provide documentation with the subcontractor list describing the bidder's efforts to obtain a bid of a qualified subcontractor at a reasonable cost and why the bidder was unable to obtain a qualified subcontractor bid. The Director must find that the bidder complied in good faith with State law requirements for any 'Special Exception' designation, in order for the bid to be considered. If awarded the contract, the Director shall supervise the bidder's efforts to obtain a qualified subcontractor bid. The amount of the awarded contract may not be adjusted to reflect the actual amount of the subcontractor's bid. Any listing of 'Special Exception' on the sublist form shall also include amount allocated for that work.

INSTRUCTIONS AND SUBCONTRACTORS LIST FORM
Page No. 2

GROUND FOR DISQUALIFICATION:

The Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law. Director may withhold awarding the contract to a particular bidder if one or more of the proposed subcontractors are considered by the Director to be unqualified to do the Work or for such other reason in the best interest of the State of Utah. Notwithstanding any other provision in these instructions, if there is a good faith error on the sublist form, at the sole discretion of the Director, the Director may provide notice to the contractor and the contractor shall have 24 hours to submit the correction to the Director. If such correction is submitted timely, then the sublist requirements shall be considered met.

CHANGES OF SUBCONTRACTORS SPECIFICALLY IDENTIFIED ON SUBLIST FORM:

Subsequent to twenty-four hours after the bid opening, the contractor may change its listed subcontractors only after receiving written permission from the Director based on complying with all of the following criteria.

- (1) The contractor has established in writing that the change is in the best interest of the State and that the contractor establishes an appropriate reason for the change, which may include, but not is not limited to, the following reasons: the original subcontractor has failed to perform, or is not qualified or capable of performing, and/or the subcontractor has requested in writing to be released.
- (2) The circumstances related to the request for the change do not indicate any bad faith in the original listing of the subcontractors.
- (3) Any requirement set forth by the Director to ensure that the process used to select a new subcontractor does not give rise to bid shopping.
- (4) Any increase in the cost of the subject subcontractor work is borne by the contractor.
- (5) Any decrease in the cost of the subject subcontractor work shall result in a deductive change order being issued for the contract for such decreased amount.
- (6) The Director will give substantial weight to whether the subcontractor has consented in writing to being removed unless the Contractor establishes that the subcontractor is not qualified for the work.

EXAMPLE:

Example of a list where there are only four subcontractors:

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #
ELECTRICAL	ABCD Electric Inc.	\$350,000.00	123456789000
LANDSCAPING	"Self"	300,000.00	123456789000
CONCRETE (ALTERNATE #1)	XYZ Concrete Inc	298,000.00	987654321000
MECHANICAL	"Special Exception" (attach documentation)	Fixed at: 350,000.00	(TO BE PROVIDED AFTER OBTAINING SUBCONTRACTOR)

**PURSUANT TO STATE LAW - SUBCONTRACTOR BID AMOUNTS CONTAINED IN THIS
SUBCONTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.**

**SUBCONTRACTORS LIST**

FAX TO 801-538-3677

PROJECT TITLE: _____

Caution: You must read and comply fully with instructions.

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #

We certify that:

1. This list includes all subcontractors as required by the instructions, including those related to the base bid as well as any alternates.
2. We have listed "Self" or "Special Exception" in accordance with the instructions.
3. All subcontractors are appropriately licensed as required by State law.

FIRM: _____

DATE: _____

SIGNED BY: _____

NOTICE: FAILURE TO SUBMIT THIS FORM, PROPERLY COMPLETED AND SIGNED, AS REQUIRED IN THESE CONTRACT DOCUMENTS, SHALL BE GROUNDS FOR DFCMS REFUSAL TO ENTER INTO A WRITTEN CONTRACT WITH BIDDER. ACTION MAY BE TAKEN AGAINST BIDDERS BID BOND AS DEEMED APPROPRIATE BY DFCM. ATTACH A SECOND PAGE IF NECESSARY.

FUGITIVE DUST PLAN

The Contractor will fill out the form and file the original with the Division of Air Quality and a copy of the form with the Division of Facilities Construction & Management, prior to the issuance of any notice to proceed.

The Contractor will be fully responsible for compliance with the Fugitive Dust Control Plan, including the adequacy of the plan, any damages, fines, liability, and penalty or other action that results from noncompliance.

Utah Division of Air Quality

April 20, 1999

**GUIDANCE THAT MUST BE CONSIDERED IN DEVELOPING AND SUBMITTING A
DUST CONTROL PLAN FOR COMPLIANCE WITH R307-309-3, 4, 5, 6, 7**

Source Information:

1. Name of your operation (source): provide a name if the source is a construction site.
2. Address or location of your operation or construction site.
3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation.
4. Lengths of the project, if temporary (time period).
5. Description of process (include all sources of dust and fugitive dust). Please, if necessary, use additional sheets of paper for this description. Be sure to mark it as an attachment.
6. Type of material processed or disturbed.
7. Amount of material processed (tons per year, tons per month, lbs./hr., and applicable units).

8. Destination of product (where will the material produced be used or transported, be specific, provide address or specific location), information needed for temporary relocation applicants.
9. Identify the individual who is responsible for the implementation and maintenance of fugitive dust control measures. List name(s), position(s) and telephone number(s).
10. List, and attach copies of any contract lease, liability agreement with other companies that may, or will, be responsible for dust control on site or on the project.

Description of Fugitive Dust Emission Activities
(Things to consider in addressing fugitive dust control strategies.)

1. Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, cleaning and leveling, etc).
2. List type of equipment generating the fugitive dust.
3. Diagram the location of each activity or piece of equipment on site. Please attach the diagram.
4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads “on” and “off” property.
5. Vehicle miles travels on unpaved roads associated with the activity (average speed).
6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc.)
7. Estimate the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

Description of Fugitive Dust Emission Controls on Site

Control strategies must be designed to meet 20% opacity or less on site (a lesser opacity may be defined by Approval Order conditions or federal requirements such as NSPS), and control strategies must prevent exceeding 10% opacity from fugitive dust at the property boundary (site boundary) for compliance with R307-309-3.

1. Types of ongoing emission controls proposed for each activity, each piece of equipment, and haul roads.
2. Types of additional dust controls proposed for bare, exposed surfaces (chemical stabilization, synthetic cover, wind breaks, vegetative cover, etc).
3. Method of application of dust suppressant.
4. Frequency of application of dust suppressant.
5. Explain what triggers the use of a special control measure other than routine measures already in place, such as covered loads or measures covered by a permit condition (increase in opacity, high winds, citizen complaints, dry conditions, etc).
6. Explain in detail what control strategies/measures will be implemented off-hours, i.e., Saturdays/Sundays/Holidays, as well as 6 PM to 6 AM each day.

Description of Fugitive Dust Control Off-site

Prevent, to the maximum extent possible, deposition of materials, which may create fugitive dust on public and private paved roads in compliance with R307-309-5, 6, 7.

1. Types of emission controls initiated by your operation that are in place “off” property (application of water, covered loads, sweeping roads, vehicle cleaning, etc.).

2. Proposed remedial controls that will be initiated promptly if materials, which may create fugitive dust, are deposited on public and private paved roads.

Submit the Dust Control Plan to:

Executive Secretary
Utah Air Quality Board
POB 144820
15 North 1950 West
Salt Lake City, Utah 84114-4820

Phone: (801) 536-4000
FAX: (801) 536-4099

Fugitive Dust Control Plan Violation Report

When a source is found in violation of R307-309-3 or in violation of the Fugitive Dust Control Plan, the source must submit a report to the Executive Secretary within 15 days after receiving a Notice of Violation. The report must include the following information:

1. Name and address of dust source.
2. Time and duration of dust episode.
3. Meteorological conditions during the dust episode.
4. Total number and type of fugitive dust activities and dust producing equipment within each operation boundary. If no change has occurred from the existing dust control plan, the source should state that the activity/equipment is the same.
5. Fugitive dust activities or dust producing equipment that caused a violation of R-307-309-3 or the source's dust control plan.
6. Reasons for failing to control dust from the dust generating activity or equipment.
7. New and/or additional fugitive dust control strategies necessary to achieve compliance with R307-309-3, 4, 5, 6, or 7.
8. If it can not be demonstrated that the current approved Dust Control Plan can result in compliance with R307-309-3 through 7, the Dust Control Plan must be revised so as to demonstrate compliance with 307-309-3 through 7. Within 30 days of receiving a fugitive dust Notice of Violation, the source must submit the revised Plan to the Executive Secretary for review and approval.

Submit the Dust Control Plan to:

Executive Secretary	Phone: (801) 536-4000
Utah Air Quality Board	FAX: (801) 536-4099
POB 144820	
15 North 1950 West	
Salt Lake City, Utah 84114-4820	

Attachments: DFCM Form FDR R-307-309, Rule 307-309

CONTRACTOR'S AGREEMENT

FOR:

THIS CONTRACTOR'S AGREEMENT, made and entered into this ____ day of _____, 20__, by and between the DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT, hereinafter referred to as "DFCM", and _____, incorporated in the State of _____ and authorized to do business in the State of Utah, hereinafter referred to as "Contractor", whose address is _____.

WITNESSETH: WHEREAS, DFCM intends to have Work performed at _____.

WHEREAS, Contractor agrees to perform the Work for the sum stated herein.

NOW, THEREFORE, DFCM and Contractor for the consideration provided in this Contractor's Agreement, agree as follows:

ARTICLE 1. SCOPE OF WORK. The Work to be performed shall be in accordance with the Contract Documents prepared by _____ and entitled "_____"

The DFCM General Conditions ("General Conditions") dated May 25, 2005 on file at the office of DFCM and available on the DFCM website, are hereby incorporated by reference as part of this Agreement and are included in the specifications for this Project. All terms used in this Contractor's Agreement shall be as defined in the Contract Documents, and in particular, the General Conditions.

The Contractor Agrees to furnish labor, materials and equipment to complete the Work as required in the Contract Documents which are hereby incorporated by reference. It is understood and agreed by the parties hereto that all Work shall be performed as required in the Contract Documents and shall be subject to inspection and approval of DFCM or its authorized representative. The relationship of the Contractor to the DFCM hereunder is that of an independent Contractor.

ARTICLE 2. CONTRACT SUM. The DFCM agrees to pay and the Contractor agrees to accept in full performance of this Contractor's Agreement, the sum of _____ DOLLARS AND NO CENTS (\$_____.00), which is the base bid, and which sum also includes the cost of a 100% Performance Bond and a 100%

CONTRACTOR'S AGREEMENT
PAGE NO. 2

Payment Bond as well as all insurance requirements of the Contractor. Said bonds have already been posted by the Contractor pursuant to State law. The required proof of insurance certificates have been delivered to DFCM in accordance with the General Conditions before the execution of this Contractor's Agreement.

ARTICLE 3. TIME OF COMPLETION AND DELAY REMEDY. The Work shall be Substantially Complete within _____ (____) calendar days after the date of the Notice to Proceed. Contractor agrees to pay liquidated damages in the amount of \$_____ per day for each day after expiration of the Contract Time until the Contractor achieves Substantial Completion in accordance with the Contract Documents, if Contractor's delay makes the damages applicable. The provision for liquidated damages is: (a) to compensate the DFCM for delay only; (b) is provided for herein because actual damages can not be readily ascertained at the time of execution of this Contractor's Agreement; (c) is not a penalty; and (d) shall not prevent the DFCM from maintaining Claims for other non-delay damages, such as costs to complete or remedy defective Work.

No action shall be maintained by the Contractor, including its or Subcontractor or suppliers at any tier, against the DFCM or State of Utah for damages or other claims due to losses attributable to hindrances or delays from any cause whatsoever, including acts and omissions of the DFCM or its officers, employees or agents, except as expressly provided in the General Conditions. The Contractor may receive a written extension of time, signed by the DFCM, in which to complete the Work under this Contractor's Agreement in accordance with the General Conditions.

ARTICLE 4. CONTRACT DOCUMENTS. The Contract Documents consist of this Contractor's Agreement, the Conditions of the Contract (DFCM General Conditions, Supplementary and other Conditions), the Drawings, Specifications, Addenda and Modifications. The Contract Documents shall also include the bidding documents, including the Invitation to Bid, Instructions to Bidders/ Proposers and the Bid/Proposal, to the extent not in conflict therewith and other documents and oral presentations that are documented as an attachment to the contract.

All such documents are hereby incorporated by reference herein. Any reference in this Contractor's Agreement to certain provisions of the Contract Documents shall in no way be construed as to lessen the importance or applicability of any other provisions of the Contract Documents.

ARTICLE 5. PAYMENT. The DFCM agrees to pay the Contractor from time to time as the Work progresses, but not more than once each month after the date of Notice to Proceed, and only upon Certificate of the A/E for Work performed during the preceding calendar month, ninety-five percent (95%) of the value of the labor performed and ninety-five percent (95%) of the value of materials furnished in place or on the site. The Contractor agrees to furnish to the DFCM invoices for materials purchased and on the site but not installed, for which the Contractor requests payment and agrees to

safeguard and protect such equipment or materials and is responsible for safekeeping thereof and if such be stolen, lost or destroyed, to replace same.

Such evidence of labor performed and materials furnished as the DFCM may reasonably require shall be supplied by the Contractor at the time of request for Certificate of Payment on account. Materials for which payment has been made cannot be removed from the job site without DFCM's written approval. Five percent (5%) of the earned amount shall be retained from each monthly payment. The retainage, including any additional retainage imposed and the release of any retainage, shall be in accordance with UCA 13-8-5 as amended. Contractor shall also comply with the requirements of UCA 13-8-5, including restrictions of retainage regarding subcontractors and the distribution of interest earned on the retention proceeds. The DFCM shall not be responsible for enforcing the Contractor's obligations under State law in fulfilling the retention law requirements with subcontractors at any tier.

ARTICLE 6. INDEBTEDNESS. Before final payment is made, the Contractor must submit evidence satisfactory to the DFCM that all payrolls, materials bills, subcontracts at any tier and outstanding indebtedness in connection with the Work have been properly paid. Final Payment will be made after receipt of said evidence, final acceptance of the Work by the DFCM as well as compliance with the applicable provisions of the General Conditions.

Contractor shall respond immediately to any inquiry in writing by DFCM as to any concern of financial responsibility and DFCM reserves the right to request any waivers, releases or bonds from Contractor in regard to any rights of Subcontractors (including suppliers) at any tier or any third parties prior to any payment by DFCM to Contractor.

ARTICLE 7. ADDITIONAL WORK. It is understood and agreed by the parties hereto that no money will be paid to the Contractor for additional labor or materials furnished unless a new contract in writing or a Modification hereof in accordance with the General Conditions and the Contract Documents for such additional labor or materials has been executed. The DFCM specifically reserves the right to modify or amend this Contractor's Agreement and the total sum due hereunder either by enlarging or restricting the scope of the Work.

ARTICLE 8. INSPECTIONS. The Work shall be inspected for acceptance in accordance with the General Conditions.

ARTICLE 9. DISPUTES. Any dispute, PRE or Claim between the parties shall be subject to the provisions of Article 7 of the General Conditions. DFCM reserves all rights to pursue its rights and remedies as provided in the General Conditions.

ARTICLE 10. TERMINATION, SUSPENSION OR ABANDONMENT. This Contractor's Agreement may be terminated, suspended or abandoned in accordance with the General Conditions.

ARTICLE 11. DFCM'S RIGHT TO WITHHOLD CERTAIN AMOUNT AND MAKE USE THEREOF. The DFCM may withhold from payment to the Contractor such amount as, in DFCM's judgment, may be necessary to pay just claims against the Contractor or Subcontractor at any tier for labor and services rendered and materials furnished in and about the Work. The DFCM may apply such withheld amounts for the payment of such claims in DFCM's discretion. In so doing, the DFCM shall be deemed the agent of Contractor and payment so made by the DFCM shall be considered as payment made under this Contractor's Agreement by the DFCM to the Contractor. DFCM shall not be liable to the Contractor for any such payment made in good faith. Such withholdings and payments may be made without prior approval of the Contractor and may be also be prior to any determination as a result of any dispute, PRE, Claim or litigation.

ARTICLE 12. INDEMNIFICATION. The Contractor shall comply with the indemnification provisions of the General Conditions.

ARTICLE 13. SUCCESSORS AND ASSIGNMENT OF CONTRACT. The DFCM and Contractor, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement, and to partners, successors, assigns and legal representatives of such other party with respect to all covenants, provisions, rights and responsibilities of this Contractor's Agreement. The Contractor shall not assign this Contractor's Agreement without the prior written consent of the DFCM, nor shall the Contractor assign any moneys due or to become due as well as any rights under this Contractor's Agreement, without prior written consent of the DFCM.

ARTICLE 14. RELATIONSHIP OF THE PARTIES. The Contractor accepts the relationship of trust and confidence established by this Contractor's Agreement and covenants with the DFCM to cooperate with the DFCM and A/E and use the Contractor's best skill, efforts and judgment in furthering the interest of the DFCM; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the Work in the best and most expeditious and economic manner consistent with the interests of the DFCM.

ARTICLE 15. AUTHORITY TO EXECUTE AND PERFORM AGREEMENT. Contractor and DFCM each represent that the execution of this Contractor's Agreement and the performance thereunder is within their respective duly authorized powers.

ARTICLE 16. ATTORNEY FEES AND COSTS. Except as otherwise provided in the dispute resolution provisions of the General Conditions, the prevailing party shall be entitled to reasonable attorney fees and costs incurred in any action in the District Court and/or appellate body to enforce this Contractor's Agreement or recover damages or any other action as a result of a breach thereof.

CONTRACTOR'S AGREEMENT
PAGE NO. 5

IN WITNESS WHEREOF, the parties hereto have executed this Contractor's Agreement on the day and year stated hereinabove.

CONTRACTOR: _____

Signature Date

Title: _____

State of _____)
County of _____)

Please type/print name clearly

On this ____ day of _____, 20____, personally appeared before me, _____, whose identity is personally known to me (or proved to me on the basis of satisfactory evidence) and who by me duly sworn (or affirmed), did say that he (she) is the _____ (title or office) of the firm and that said document was signed by him (her) in behalf of said firm.

(SEAL)

Notary Public

My Commission Expires _____

APPROVED AS TO AVAILABILITY
OF FUNDS:

David D. Williams, Jr. Date
DFCM Administrative Services Director

**DIVISION OF FACILITIES
CONSTRUCTION AND MANAGEMENT**

- Manager Date
Capital Development/Improvements

APPROVED AS TO FORM:
ATTORNEY GENERAL
May 25, 2005
By: Alan S. Bachman
Asst Attorney General

APPROVED FOR EXPENDITURE:

Division of Finance Date

PERFORMANCE BOND
(Title 63, Chapter 56, U. C. A. 1953, as Amended)

That _____ hereinafter referred to as the "Principal" and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah, hereinafter referred to as the "Obligee," in the amount of _____ DOLLARS (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____, for the approximate sum of _____ Dollars (\$ _____), which Contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall faithfully perform the Contract in accordance with the Contract Documents including, but not limited to, the Plans, Specifications and conditions thereof, the one year performance warranty, and the terms of the Contract as said Contract may be subject to Modifications or changes, then this obligation shall be void; otherwise it shall remain in full force and effect.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the state named herein or the heirs, executors, administrators or successors of the Owner.

The parties agree that the dispute provisions provided in the Contract Documents apply and shall constitute the sole dispute procedures of the parties.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the Provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____
(Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____
Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney in-fact of the above-named Surety Company and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General

PAYMENT BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____ authorized to do business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); with its principal office in the City of _____, hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah hereinafter referred to as the "Obligee," in the amount of _____ Dollars (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____ for the approximate sum of _____ Dollars (\$ _____), which contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to Principal or Principal's Subcontractors in compliance with the provisions of Title 63, Chapter 56, of Utah Code Annotated, 1953, as amended, and in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise it shall remain in full force and effect.

That said Surety to this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder, or the specifications or drawings accompanying same shall in any way affect its obligation on this Bond, and does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to the Work or to the specifications or drawings and agrees that they shall become part of the Contract Documents.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____ (Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____ Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General



Division of Facilities Construction and Management

CHANGE ORDER # _____

CONTRACTOR: _____

AGENCY OR INSTITUTION: _____

PROJECT NAME: _____

PROJECT NUMBER: _____

CONTRACT NUMBER: _____

ARCHITECT: _____

DATE: _____

CONSTRUCTION CHANGE DIRECTIVE NO.	PROPOSAL REQUEST NO.	AMOUNT		DAYS	
		INCREASE	DECREASE	INCREASE	DECREASE

	Amount	Days	Date
ORIGINAL CONTRACT			
TOTAL PREVIOUS CHANGE ORDERS			
TOTAL THIS CHANGE ORDER			
ADJUSTED CONTRACT			

DFCM and Contractor agree that the terms, contract sum, scope of the Work and time specified in this Change Order shall constitute the full accord and satisfaction, and complete adjustment to the Contract and includes all direct and indirect costs and effects related to, incidental to, and/or reasonably implied from such change in the contract terms, sum, scope of the Work and time.

Contractor: _____

Date

Architect/Engineer: _____

Date

Agency or Institution: _____

Date

DFCM: _____

Date

Funding Verification: _____

Date

Page ____ of ____ page(s)

30

**CERTIFICATE OF SUBSTANTIAL COMPLETION**

PROJECT _____ PROJECT NO: _____
AGENCY/INSTITUTION _____

AREA ACCEPTED _____

The Work performed under the subject Contract has been reviewed on this date and found to be Substantially Completed as defined in the General Conditions; including that the construction is sufficiently completed in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the State of Utah can occupy the Project or specified area of the Project for the use for which it is intended.

The DFCM - (Owner) accepts the Project or specified area of the Project as Substantially Complete and will assume full possession of the Project or specified area of the Project at _____ (time) on _____ (date).

The DFCM accepts the Project for occupancy and agrees to assume full responsibility for maintenance and operation, including utilities and insurance, of the Project subject to the itemized responsibilities and/or exceptions noted below:

The Owner acknowledges receipt of the following closeout and transition materials:

☐ As-built Drawings ☐ O & M Manuals ☐ Warranty Documents ☐ Completion of Training Requirements

A list of items to be completed or corrected (Punch List) is attached hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereof. The amount of _____ (Twice the value of the punch list work) shall be retained to assure the completion of the punch list work.

The Contractor shall complete or correct the Work on the list of (Punch List) items appended hereto within _____ calendar days from the above date of issuance of this Certificate. The amount withheld pending completion of the list of items noted and agreed to shall be: \$ _____. If the list of items is not completed within the time allotted the Owner has the right to be compensated for the delays and/or complete the work with the help of independent contractor at the expense of the retained project funds. If the retained project funds are insufficient to cover the delay/completion damages, the Owner shall be promptly reimbursed for the balance of the funds needed to compensate the Owner.

CONTRACTOR (include name of firm) by: _____
(Signature) DATE

A/E (include name of firm) by: _____
(Signature) DATE

USING INSTITUTION OR AGENCY by: _____
(Signature) DATE

DFCM (Owner) by: _____
(Signature) DATE

SECTION 275123 - EMERGENCY COMMUNICATIONS AND SECURITY SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the upgrade to an existing communications system in order to provide the functions of emergency call activation, general voice alert notifications, system clock correction, and security device activation and alarm using the same home run cabling.
- B. The equipment furnished under this specification shall be the standard product of one manufacturer and shall be equal in performance and quality to the Rauland-Borg Telecenter SLC System.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Detail the system including the following:
 - 1. Cabling Diagrams: Single-line block diagrams showing cabling interconnection of all components for this specific equipment. Include cable type for each interconnection.
 - 2. Wiring Diagrams: Power, signal, and control wiring.
 - 3. Station Installation Details: For built-in equipment; dimensioned and to scale.
 - 4. Equipment Cabinet Drawings: Dimensioned and to scale.
- C. Coordination Drawings: Detail system components that fit, match, and line up with provisions made in equipment specified in other Sections or in separate contracts.
- D. Manufacturer Certificates: Signed by manufacturers certifying that emergency call equipment complies with requirements.
- E. Field Tests Reports and Observations: Include record of final adjustments certified by Installer.
- F. Operation and Maintenance Data: For emergency call equipment to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
 - 1. Operating instructions.
 - 2. Troubleshooting guide.
 - 3. Wiring diagrams and terminal identification.
 - 4. Equipment parts list.
 - 5. Product data for types and sizes of wires and cables used.
- G. Warranty: Special warranty specified in this Section.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of equipment required for this Project.
- B. Manufacturer Qualifications: A firm experienced in manufacturing equipment similar to that indicated for this Project and that maintains technical support services capable of providing user with training, parts, and emergency maintenance and repair with a 24-hour-maximum response time.
- C. Source Limitations: Obtain communications equipment components through one source from a single manufacturer. All components and the system as a whole shall meet or exceed the minimum standards issued by the Electronic Industries Alliance (EIA). All work in conjunction with this installation shall meet the provisions of the National Electrical Code (NEC) and other applicable codes.
- D. Electrical Components, Devices, and Accessories: Listed and labeled according to UL standards.

1.4 COORDINATION

- A. Coordinate wiring paths and maintenance access at locations indicated in the drawings. Coordinate trim features and finishes at install locations to present a unified design appearance.

1.5 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace system components that fail in materials or workmanship within specified warranty period. Special warranty applies to materials only, on a prorated basis, for a one year period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Rauland-Borg Corporation.

2.2 SYSTEM REQUIREMENTS

- A. The system shall be an *Telecenter SLC* System (SLC) or approved equal. Operation shall be accomplished simply and easily with little or no training. The system shall be microprocessor-controlled, of modular design and shall provide the following features and functions:
- B. Simple, single action signaling for emergency call in by wall mounted switches with easily identifiable, color coded, large buttons.
- C. Call assurance options for positive system feedback indicating to them that the call for assistance has been made successfully.
- D. Contact closure/relay resources that are not fixed by hardware to be dedicated to specific rooms, but can be allocated by software to as many different functions a single room may require or can be spread out in the community to perform such tasks as intercom audio connection, magnetic door lock activation or security camera control.
- E. System supervision of room station wiring (both speaker wiring, clock correction, security and switch wiring) with multiple (a minimum of 4 possible) fully programmable system actions to be automatically executed upon detection of a fault. Systems that supervise only call switch wiring and not the speaker wiring shall not be acceptable.
- F. Ability for staff to communicate to resident rooms from anywhere in the facility by using wireless/cell phones.
- G. Emergency calls for assistance can be sent to staff wired, wireless, or cell phones. When staff answers the call, the voice message shall identify the calling room number. While listening to the voice message, staff can directly and instantaneously connect, by pressing a single button on their phone, to the telephone or speaker in the room requiring assistance.
- H. Provision for Visual Alert (a visual signal to alert students and staff that audio communication will occur) for hearing challenged persons who use hearing aids.
- I. Provision for automatic notification to staff indicating that audio messages have been sent to hearing impaired persons and should be conveyed to these residents using other means.
- J. Zone Page, All Page and Emergency Page from telephones to override lower priority audio communications and allow critical announcements. Systems that make users wait for lower priority audio communication to terminate shall not be acceptable.
- K. Emergency/Paging microphone interface with push-to-talk switch input, for simplicity of operation, and emergency page override of intercom for critical community-wide announcements.
- L. Ability to use line level audio input for music distribution to selected areas or rooms.
- M. Ability to make an intercom call to up to four (4) rooms with staff to get an immediate response from the appropriate staff member.
- N. Ability to make Voice Announcement to selected areas like corridors, rooms with staff, etc. indicating room number of the area requesting assistance.

- O. System functions can be individually allowed or disallowed on staff phones by assigning up to three (3) different numeric PIN codes, of three digits each, to each function. The system shall have one line, a priority line, in which all functions are always allowed.
- P. Provisions for sensing up to six (6) hardware levels from a station port: Open, Supervision, Auxiliary Call, Normal Call, Priority Call and Short.
- Q. System responses to a given hardware call priority level shall be flexible, software programmable, with multiple actions (a minimum of 4 possible) embedded in the response which shall be sequenced or escalated according to the software programming of the system configuration.
- R. An embedded, battery backed-up, real-time clock and calendar with selectable 12 or 24 hour format and capable of automatically adjusting for daylight savings time.
- S. A total of two hundred fifty-six (256) time scheduled events, programmable into up to eight (8) programmable schedules. These time events may trigger actions in individual schedule zones, multiple schedule zones or all schedule zones.
- T. Up to four (4) independent, programmable system configurations which can be enabled or disabled based on a schedule.
- U. Scheduled events shall have the ability to change the System Configuration, activate a specific relay for control functions, sound a selected tone to a group of speakers, turn on or off program distribution for a group of speakers, start a reminder, or play out selected voice announcements to a group of speakers.
- V. Up to sixty-four (64) calendar events capable of being programmed for a specific date, or on a recurring date every year. These date events can be used to automatically change schedules.
- W. Up to four (4) Telephone Interface Ports (3-two way ports and 1-one way port) on the system to interface easily to community telephone systems such as EKSU, PBX, Centrex systems, or POTS lines and to allow connection to staff cell phones or pocket paging systems.
- X. The ability, when using a two way Telephone Interface Port, to grab a PBX or POTS line, dial out preprogrammed DTMF digits to ring a party, play a voice message when the call is answered and then, if desired, connect the outside party to the speaker or the telephone in the calling room for instant communication.
- Y. Ability to dial out Pocket Page access numbers and upon answer, leave a pocket pager message indicating the call priority and the room number requesting assistance.
- Z. Up to eight (8) security zones that can be armed and disarmed manually or according to a time schedule. Security zones can be armed and disarmed individually or in groups; the system can arm and disarm one room at a time, if desired.
- AA. Ability to use any phone connected to the PBX (as a console) to operate the system. Systems that operate with a limited number of consoles, or only by a specific console, shall not be acceptable.

- BB. The system shall have fifteen (15) standard tones available for selection plus the option to use tones from an external tone generator. Tones selected from these sixteen sources shall have software programmable volume controls in addition to any hardware controls available. If desired, a selected tone can be assigned to two or more system tone numbers, in which case the software volume control can be set independently for each tone number.
- CC. Preannounce tone to alert the room of an intercom call or page. Any tone in the system can be selected for this function and the duration of the tone shall be programmable. The system shall be capable of having no preannounce tone, if desired.
- DD. Page Ending Tone to notify rooms that a page has finished. Any tone in the system can be selected for this function and the duration of the tone shall be programmable. The system shall be capable of having no page ending tone, if desired.
- EE. Ability to provide Executive Override by dialing a code which allows a manager to interrupt a higher priority function or override privacy and get their call through.
- FF. Provision for a two wire motion detector for space intrusion detection.
- GG. Ability to make a voice announcement on mobile radios carried by staff alerting them of an emergency call.
- HH. Full operation (including Intercom) during power failure utilizing optional battery back up power supply.
- II. Ability to interface with Facility Manager Software providing the following features:
 - 1. Generation of reports for staff and management.
 - 2. Ability to enter comments about any or all system events in order to log what the event was about, who initiated the event, who responded, what actions were taken, etc.
 - 3. Ability to customize the description of each event, action or activity to make them user friendly.
 - 4. Provision to send e-mail notification to staff or manager in response to a call.
 - 5. Easy to read CRT display of system(s) activity.
- JJ. Coordinate the features of materials and equipment to form an integrated system. Match components and interconnections for optimum performance of specified functions.
- KK. Expansion Capability: Equipment ratings, housing volume, spare keys, switches, relays, annunciator modules, terminals, and cable conductor quantities adequate to increase the number of stations in the future by 20 percent above those indicated without adding internal or external components or main trunk cable conductors.
- LL. Equipment: Solid state, modular.

2.3 FUNCTIONAL PERFORMANCE

- A. **NORMAL CALL** - Normal calls shall be initiated at the resident station by momentarily depressing the "Normal Call" button on the call switch. This action shall cause the following to occur:
1. The Call Placed tone will sound on the room speaker.
 2. Staff answers the call in many ways: by picking up an *SLC* phone and dialing *; by picking up a PBX phone, pressing the *SLC* button and dialing *; by answering their cell phone, listening to the voice message that says the room number and the call priority ("Normal call from room three zero zero one, push star to answer"), and then pressing * to connect directly to the room speaker.
 3. A preannounce tone will sound on the room speaker and an intercom call will be established between the staff and the room.
 4. Staff and resident will have two way communication.
 5. Upon completion of the call the staff will hang up the phone, the call will be cancelled.
- B. **EMERGENCY CALL** - Emergency calls shall be originated at the room station by momentarily depressing the "Emergency" button. This action shall cause the following to occur:
1. The Call Placed tone will sound on the room speaker.
 2. Staff answers the call in many ways: by picking up an *SLC* phone and dialing *; by picking up a PBX phone, pressing the *SLC* button and dialing *; by answering their cell phone, listening to the voice message that says the room number and the call priority ("Emergency call from room three zero zero two, push star to answer"), and then pressing * to connect directly to the room speaker.
 3. A preannounce tone will sound on the resident room speaker, the Desk Top Display will change to "*EMER 3002" and an intercom call will be established between the staff and the resident.
 4. Staff and resident will have two way communication.
 5. Upon completion of the call the pull cord switch will need to be reset (by sliding up) to cancel the call, the call will be cancelled and the display will show the time and date.
 6. Upon completion of the call the pull cord switch will need to be reset (by sliding up) to cancel the call, the call will be cancelled and the display will show the time and date.
- C. **MAKING VOICE ANNOUNCEMENTS** – It shall be possible for the staff to selectively make voice announcements to individual rooms, multiple zones or the entire facility. It shall also be possible to exempt any room or zone, from paging announcements. It shall not be necessary to operate the "Push-To-Talk" switch when paging using a telephone.
- D. **E-MAIL NOTIFICATION**_ It shall be possible to notify a manager of calls by sending an e-mail to a personal computer or a wireless PDA. This may be used for calls not answered in the expected amount of time. The operation will be as follows:
- E. **THE FACILITY MANAGER** - The Facility Manager Software is a specialized database program which automatically collects and stores all the calling activities in the *SLC*. This information can be displayed on a computer monitor as activities occur, is stored on disk, and may be sorted to produce a variety of specialized reports.

- F. SECURITY FUNCTIONS – It shall be possible to integrate the security functions of a facility into the Telecenter SLC System. Motion sensors and door switches shall be used as intrusion alarm sensors and SLC telephones shall be used as keypads for the arming and disarming of rooms or zones. It shall be possible to arm a room, a zone or the whole facility and then disarm one room at a time, if desired. If an alarm is caused by an intruder, it shall be possible to convey the alarm through speakers, pocket pager, cell phone or mobile radio.
- G. VISUAL MESSAGE ALERT – For hearing impaired persons, the system shall provide a visual alert before allowing staff to make an audio page or intercom call. A programmed amount of time shall be allowed for these people to prepare for incoming audio. The calling staff shall be given audible feedback to notify them that they need to wait before starting to talk.
- H. FACILITY CLOCK CORRECTION – It shall be possible to connect correctable clocks compatible with the main communications system to allow correction signals and power to utilize the same home run cabling that is used for speakers and call in information.

2.4 EQUIPMENT DESCRIPTIONS

- A. CONTROLLER (SLCRMCT) - The heart of the system shall be an SLCRMCT (Rack-Mount Controller). It is a full-feature controller for a digitally processed, single or multi-channel, communications system. The system is capable of simultaneously handling staff telephone intercom communication, program distribution, pocket paging, and prioritized multi-level calls. The system is specifically designed to interface to a facility's PBX, EKSU, Centrex system, or POTs lines to provide integrated communications between the telephones, intercom/paging speakers and call switches. Alternately, the system can be configured with stand-alone staff telephones. The controller includes one telephone interface port. The SLCRMCT can accommodate up to eighty-three (83) room station ports. With Expanders, the system can accommodate up to four hundred eighteen (418) room station ports. The SLCRMCT includes power supply.
- B. EXPANDER (ICS2XPRM) - The system shall be expanded by adding ICS2XPRM Rack Mount Expanders. The expander shall provide mounting for up to seven Line Modules. Up to four expander chassis can be added to the initial Controller to bring the total SLC capacity up to thirty-five (35) Line Modules.
- C. INTERCOM AMPLIFIER MODULE (ICSIAM) - The Intercom Amplifier Module shall be an ICSIAM, a solid-state digitally controlled intercom amplifier designed specifically for use with the *Telecenter SLC* System (SLC). Each Controller (SLCRMCT) has room for two (2) ICSIAM. The ICSIAM incorporates low-distortion, balanced listen mode input and talk mode output amplifiers that provide the voice communication between the staff user on the telephone and a room/intercom speaker. The ICSIAM has an Automatic Gain Control (AGC) in the Listen Mode that assists in amplifying soft voices along with limiting very loud voices; this optimizes the Listen intelligibility in an intercom environment. The AGC has an adjustable threshold control for adapting to various acoustic environments and can also be defeated if desired. To further enhance the voice intelligibility of the SLC, the ICSIAM frequency response has been shaped to match that of the human voice.

The ICSIAM automatically switches between talk and listen modes based on whether the staff user (on the telephone) is speaking or not. The automatic (VOX) switching provides for hands-

free intercom at the room/intercom speaker. A control is provided to adjust the automatic VOX switching sensitivity to suit the staff users' preference. The ICSIAM also provides for manual Push-To-Talk (Release to Listen) override of the automatic talk/listen switching of the intercom channel by the staff user.

The ICSIAM is specifically designed to provide superior talk/listen intercom performance over unshielded Category 5 cabling in addition to working over standard two twisted pair shielded cabling.

- C. **REMOTE PROGRAM AND MICROPHONE INTERFACE (ICSPMI)** - The Remote Program and Microphone Interface shall be ICSPMI to provide easy interface to an audio program source and paging microphone either located at the head-end equipment or remote up to 3000 feet (900 m) from the head-end equipment. The ICSPMI shall include two sets of inputs: Program and Microphone. The Program input is a standard line level input to plug into line level source (tape, CD, tuner, etc.). The Microphone input is for a push-to-talk microphone. When the push-to-talk bar is pressed on the microphone, the ICSPMI switches from the audio program source (if active) to the microphone, distributing the microphone signal to a preprogrammed set of paging zones or all paging zones. Pressing push-to-talk on the microphone will override any other user initiated audio function on the SLC (e.g. intercom, zone page, etc.) allowing this microphone to be used for emergency announcements.
- D. **TELEPHONE INTERFACE MODULE (ICS2TIM)** - The Telephone Interface Module shall be an ICS2TIM designed to provide interface between the *Telecenter SLC* System (SLC) and the facility's PBX, EKSU, Centrex system or connected to POTS line. Alternately, the telephone port of the ICS2TIM may be used without a telephone switch and may be connected directly to a stand-alone analog staff telephone. Through the ICS2TIM interface, the user can access all system features including intercom, paging, program distribution, selecting schedules, etc. The ICS2TIM module also provides for all dial-out features including ringing specific telephone extensions in response to room calls, autodialing and connecting a resident telephone to staff phone, and dial-up pocket page notification of calls. A Ring Generator is required to ring directly-connected analog phones or PBX/EKSU trunk ports.
- E. **STATION LINE MODULE (TCSLM)** - The TCSLM Station Line Module is designed specifically for use with the *Telecenter SLC* System (SLC). Each TCSLM module provides 12 station ports. Each of these TCSLM ports includes call switch level sensing (normal, emergency, etc.), security and line supervision functions, and audio switching functions for intercom, paging, and program distribution. TCSLM shall be used when supervision of speakers is desired. With the use of TCSLM at the headend and SLCMASS (Message Alert/Speaker Supervision Module) at the room location SLC will report any opens in speaker wiring. Depending on the configuration of the SLC, each station input circuit can receive up to 3 user initiated call levels and line supervision. When the security feature of the SLC is enabled, one of the call levels is used to sense a security signal from an appropriate security device. Each station relay can support a speaker load of 5 watts and one privacy handset. Alternately, each of the stations relays can be configured as a contact closure output (up to 2 Amps at 28 volts DC) to control devices such as security cameras, access control, etc. The TCSLM mounts into the SLCDTCT, SLCRMCT, SLCDTEX or ICS2XPRRM. All TCSLM field wiring terminations are via a standard telco punchblock that connects to the module via an Amphenol (50-pin "D") connector. Wiring from each room station to the TCSLM (for both intercom and call switches) is home-run and accomplished using two twisted pairs of Category 5 cable. To provide for private conversations, the privacy handset can be added in public or noisy areas. The phone does not require any additional cabling.

- F. **AUDIO AND CONTROL MODULE (TCACM)** - The TCACM Audio and Control Module are designed specifically for use with the *Telecenter SLC* System (SLC). Each TCACM module provides 12 high current relays and 12 input circuits. These relays can be used for intercom and program audio switching, contact closure outputs for high-current applications, or standard station ports. When used for audio switching, each port can switch up to 120 watts of audio power. If the relay is used as a high-current contact closure output, each relay can switch up to 5 amps of current at 120 volts AC. Any pair of relay and input circuit can be configured as a standard room station port. As a room station port, it includes three levels of call priority (normal, emergency, auxilliary), supervision of the switch wiring, and the audio switching function for intercom and audio page distribution (using the corresponding relay). Each port (relay and input) can be connected to a speaker, call switch and a privacy handset. The TCACM mounts into the SLCDTCT, SLCRMCT, SLCDTEX or ICS2XPRRM and takes up two line card spaces. All TCACM field-wiring terminations are via a standard telco punchblock that connects to the module via a 50-pin “D” connector. Field wiring is home-run from the room stations to the TCACM. For intercom only, the wiring is accomplished using one pair Category 5 cable. For both intercom and call-in, the wiring is accomplished using two pairs of a Category 5 cable. To provide for private conversations, the privacy handset can be added in public or noisy areas. The phone does not require any additional cabling.
- G. **CALL STATION MODULE (SLCCSM)** - To provide call switch only connections (no audio) in each room an SLCCSM Call Switch Module, specifically designed for use with the *Telecenter SLC* (SLC), shall be used. Each SLCCSM module provides 24 station ports. Each of these SLCCSM ports includes call switch level sensing (normal, emergency, etc.), security and line supervision functions. Depending on the configuration of the SLC, each station input circuit can receive up to 3 user initiated call levels and line supervision. When the security feature of the SLC is enabled, one of the call levels is used to sense a security signal from an appropriate security device. The SLCCSM mounts into the SLCDTCT, SLCRMCT, SLCDTEX or ICS2XPRRM and takes up two line card spaces. All SLCCSM field wiring terminations are via a standard telco punchblock that connects to the module via an Amphenol (50-pin “D”) connector. Field wiring from a room station’s call switches to the SLCCSM is home-run and accomplished using: one twisted pair.
- H. **ROOM SPEAKER MODULE (REFUGE SPEAKER STATION - RS505)** - The RS505 3-Gang Speaker Module is designed for use in areas where audio communication is desired. The RS505 Speaker Module is designed to fit into a standard three-gang back box. The built in speaker is a 0.5 watt dynamic speaker/microphone with an impedance of 8 ohms and a 25V matching transformer, with center-tap allowing for ¼ watt operation, if desired. The module has a one-gang opening to accommodate any of the PB or CA series Call Switches. The combination of the Call Switch with the Speaker Module provides all basic intercom, call and paging capabilities.
- I. **PB SERIES CALL SWITCHE (SLCPBEMNM)** The PB series Call Switche is designed specifically for use with *Telecenter SLC* System (SLC). Each switch assembly features a high-impact Cycolac (UL94V-0 rated) faceplate finished in light gray. Each is designed for single-gang flush mounting individually or in the single-gang opening of an RS505 module. The SLCPBEMNM Emergency / Normal switch features a Yellow “Normal” and a Red “Emergency” Call Button. Normal and Priority calls are placed by momentarily depressing the “Normal” or “Emergency” call button respectively. Depending on the programming of the SLC, calls can cause various responses in the system.

- J. MESSAGE ALERT – SPEAKER SUPERVISION MODULE (SLCMASS) - The SLCMASS Message Alert – Speaker Supervision Module is designed specifically for use with *Telecenter SLC* System (SLC). The module is provided with a pigtail connector and is wrapped in shrink tubing for universal installation. The module can be used for one of two unique applications: Message Alert - In this application the module provides an interface between the message alert signal from head-end and the message alert indicator in the room of hearing challenged persons. The message alert indicator in the room is usually some type of light, often a strobe light. Speaker Supervision – In this application the module monitors signal voltage to the room speaker and reports an open in the wiring between the head-end and room speaker.
- K. Speaker:
1. Loudspeakers shall be a 8" dual cone type with a 10 ounce, ceramic magnet. Power handling rating shall be 5 watts continuous with a sensitivity of 94 dB at 1 meter/1 watt and frequency response of +/- 5 dB from 80 to 15,000 Hz. The speaker shall have an impedance of 8 ohms and be equipped with a 70 volt matching transformer with power taps from 0.5 to 4 watts. Recessed ceiling mounted speaker assemblies shall mount on a Atlas Sound T720-8-A or similar baffle on a T95-8 series or similar enclosure.e:

2.5 MISCELLANEOUS EQUIPMENT COMPONENT DESCRIPTIONS

- A. Motion Detectors: Provide both ceiling mount, 360 degree coverage type, and wall mount type, 90 degree X 40 feet dispersion, compatible with the two wire power and signal annunciation used by the Telecenter SLC system, at locations as indicated in the drawings.
- B. Cable: Provide plenum rated Category 5e UTP 4 pair cable.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Wiring Method: Install wiring in raceway where possible in existing room locations. Provide structural support for cabling at regular intervals (minimum 4 feet separation). Cabling shall not be installed using drop ceiling support or allowed to lay on top of pipes, lighting fixtures or mechanical ductwork.
- B. Install cables without damaging conductors or jacket.
- C. Do not bend cables, in handling or in installing, to smaller radii than minimums recommended by manufacturer.
- D. Pull cables without exceeding cable manufacturer's recommended pulling tensions.
1. Pull cables simultaneously if more than one is being installed in same raceway.

2. Use pulling compound or lubricant if necessary. Use compounds that will not damage conductor or insulation.
 3. Use pulling means, including fish tape, cable, rope, and basket-weave wire or cable grips, that will not damage media or raceway.
- E. Install exposed raceways and cables parallel and perpendicular to surfaces or exposed structural members, and follow surface contours. Secure and support cables by straps, staples, or similar fittings designed and installed so as not to damage cables.
- F. Wiring within Enclosures: Provide adequate length of conductors. Bundle, lace, and train conductors to terminal points with no excess. Provide and use lacing bars in cabinets.
- G. Splices, Taps, and Terminations: Make splices, taps, and terminations on numbered terminal strips in junction, pull, and outlet boxes, terminal cabinets, and equipment enclosures. Install terminal cabinets where there are splices, taps, or terminations for eight or more conductors.
- H. Impedance and Level Matching: Carefully match input and output impedances and signal levels at signal interfaces. Provide matching networks if required.
- I. Identification of Conductors and Cables: Retain color-coding of conductors and apply wire and cable marking tape to designate wires and cables so all media are identified in coordination with system wiring diagrams. Label stations, controls, and indications using approved consistent nomenclature.
1. Label each cable within 4 inches (100 mm) of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
 2. Label exposed cables at intervals not exceeding 15 feet (4.5 m).
 3. Prepare cable administration drawings to show building floor plans with cable administration point labeling. Identify labeling convention and show labels for terminal hardware and positions, cables, stations and devices and equipment grounding conductors.

3.2 GROUNDING

- A. Ground cable shields and equipment to eliminate shock hazard and to minimize ground loops, common-mode returns, noise pickup, cross talk, and other signal impairments.
- B. Signal Ground Terminal: Locate at main equipment cabinet. Isolate from power system and equipment grounding except at connection to main building ground bus.

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including connections. Report results in writing.
- B. Test Procedure: Comply with the following:
1. Schedule tests a minimum of seven days in advance of performance of tests.

2. Report: Submit a written record of test results.
3. Operational Test: Perform an operational system test, and demonstrate proper operations, adjustment, and sensitivity of each station. Perform tests that include originating station-to-station and call messages at each emergency call station. Verify proper routing, volume levels, and freedom from noise and distortion. Test each available message path from each station on the system. Meet the following criteria:
 - a. Speaker Output: 90 dB plus or minus 3 dB, 300 to 3000 Hz, reference level threshold of audibility 0 dB at 0.02 millipascals of sound pressure.
 - b. Gain from tenant's bedside station to emergency station, with distortion less than 65 dB (plus or minus 3 dB, 300 to 3000 Hz).
 - c. Signal-to-Noise Ratio: Hum and noise level at least 45 dB below full output.
- C. Retesting: Rectify deficiencies indicated by tests and completely retest work affected by such deficiencies at Contractor's expense. Verify by the system test that the total system meets these Specifications and complies with applicable standards. Report results in writing.
- D. Inspection: Verify that units and controls are properly labeled and interconnecting wires and terminals are identified.

3.4 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting sound and control levels and controls to suit actual occupied conditions. Provide up to three visits to Project during other-than-normal operating hours for this purpose.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel and staff to adjust, operate, and maintain emergency call equipment. Provide a minimum of four hours training.

END OF SECTION 275123